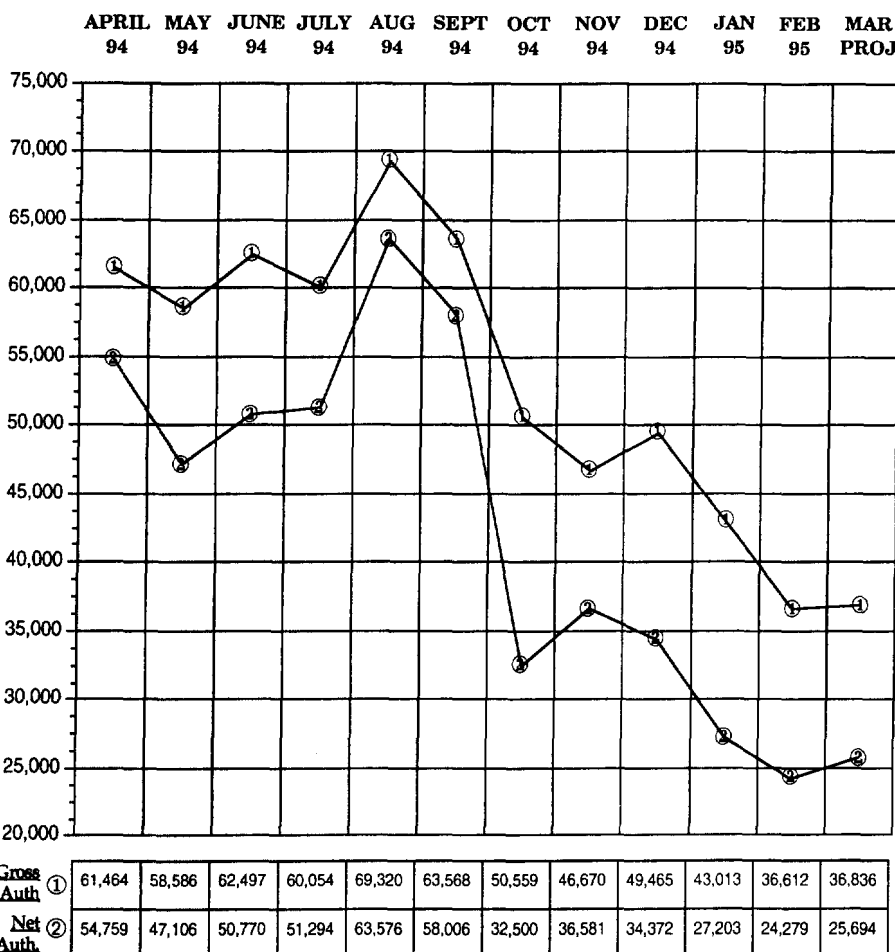
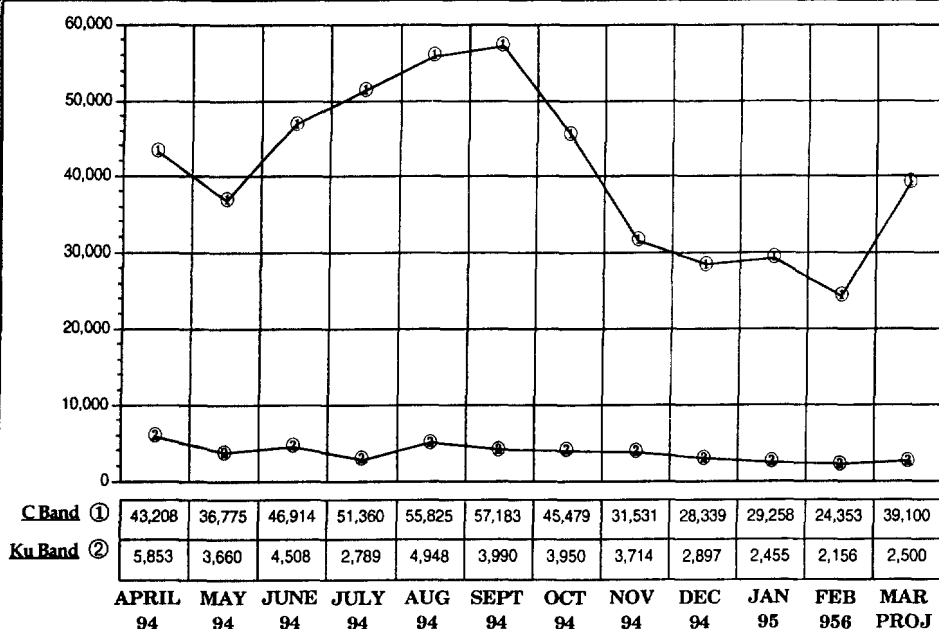


GI AUTHORIZATIONS



LNBS



Receiver Shipments Total 693,653 from April '94 to March '95

(From Page 8) module shortage can account for some of the significant (and steady) drop in receivers from September through January.

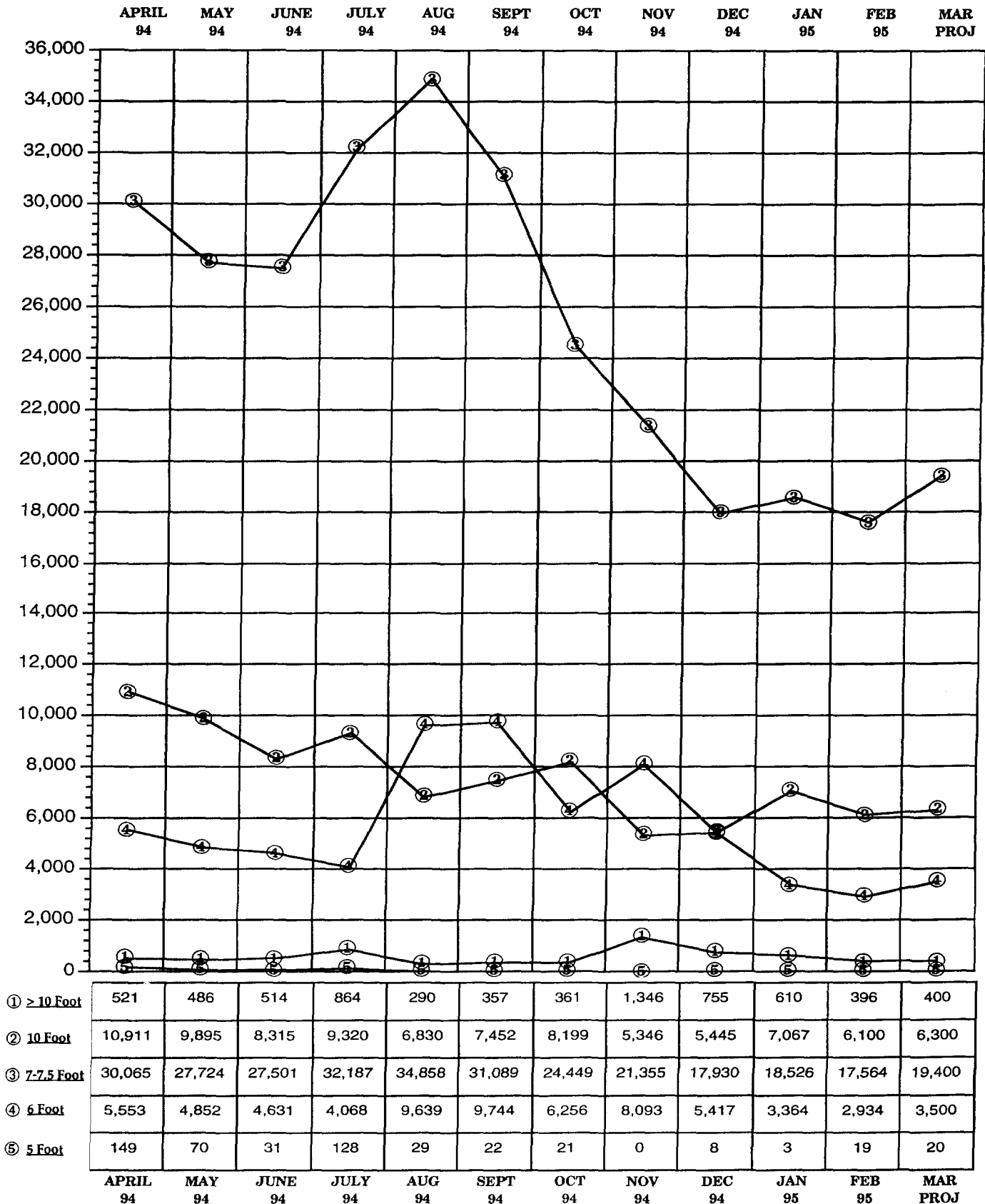
Of course, all of the receiver numbers pale in comparison to the August high of 93,188 receivers, which were shipped amidst the crushing media hoopla on the DBS services. This high-water mark helped push receiver shipments for a 12-month span to an all-time high of 693,653, which, in turn helped bring the average number of receivers shipped during each month to 57,804.

Meanwhile, antenna shipments for this same time period climbed to a total of 469,259. The number of average monthly shipments, 39,105, was surpassed in every month during the spring, summer and early fall, but, as expected, fell below this average in the frozen winter months.

Lastly, LNB shipments totaled 532,745 during this time, with an average monthly shipment number of 39,105. As predicted, Ku LNBS have slowly decreased throughout this 12-month period as fewer consumers seem to be drawn toward the less-powerful (and some say less predictable) Ku-Band signals.

Back to the Future: One factor that should positively affect C-Band is the industry's initial venture into mainstream advertising. Additionally, some insiders think that the combined \$250-million advertising budget of **DIRECTV**, **USSB** and **PRIMESTAR** will actually help C-Band sales via pull-through sales and increased awareness of multi-video programming options. •

ANTENNAS



INTERNATIONAL MARKETS

According to Robert Thalman, vice president of Strategic Marketing for **Turner International**, there are close to one billion television households in the world. Of this, about 86 million receive multichannel programming – and that's expected to grow to 164 million in the next five years, then leap to 300 million in 2005.

Need we say that U.S. multichannel industries are salivating here?

Not just salivating but diving into non-U.S. markets with the fervor of a kindergarten class at a taffy pull.

Today, in fact, virtually any multichannel video programmer or equipment maker in the U.S. has at least some interests overseas. (The sole exception we can think of off hand is **PRIMESTAR** and while it may have no foreign interests, its parents most certainly do.)

But back to the point: Today the U.S. DBS juggernaut **DIRECTV** is eyeing footholds in both Latin America and Mexico. (Yes, **Hughes** is working through various divisions and partnerships but the point is hard to miss.) Meanwhile **HBO**, **Showtime**, **Turner**, **International Family**, **Discovery**, **Encore** – add in however many names you like – are all in international markets. (Even **Arts & Entertainment's** History Channel, with rather clever plans to team up with broadcasters and media companies in other countries to create clones of its semi-successful U.S. launch.) Likewise, key U.S. equipment makers are all overseas, and in several cases the

international market is by far their biggest.

All this globe-trotting, many say, can be traced back to the time when **MTV** brought down the Berlin Wall. Perhaps that's not

Unfortunately, China is not the only potential international treasure trove to recognize the dangers of letting its people see how the rest of the world lives. To date, Saudi Arabia, Singapore and India outlaw home satellite dishes. Iran plans to ban the dishes (cable's okay, though, as the cleric rulers can more easily edit its content).

On a more positive side, the Malaysian

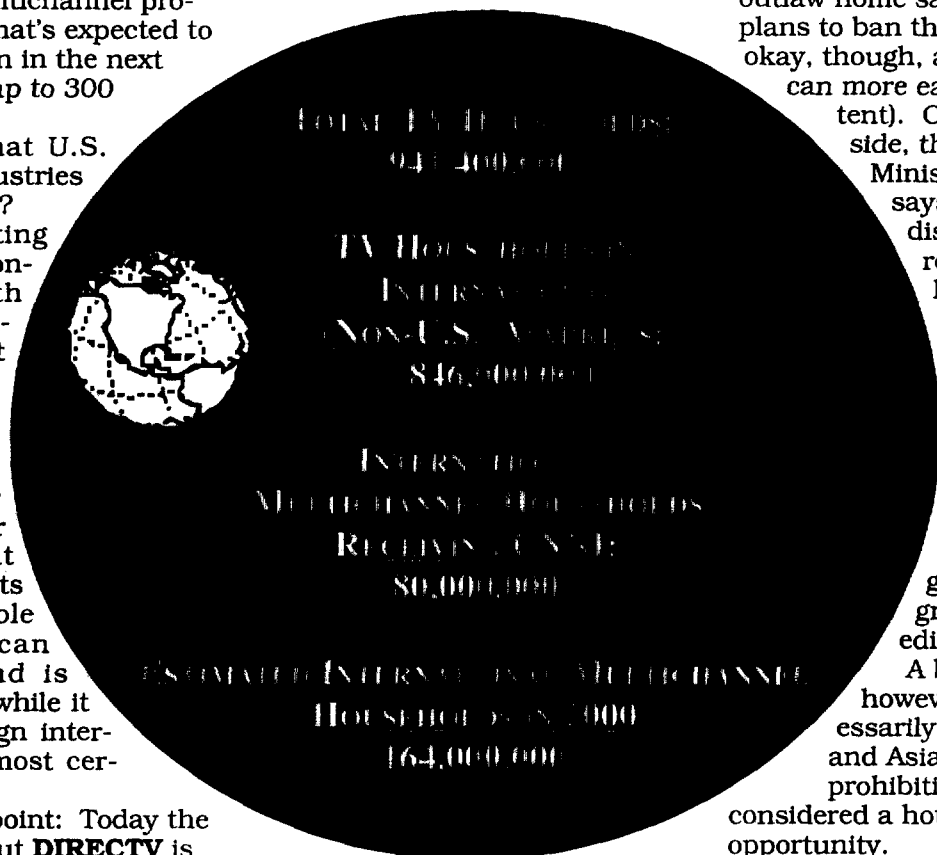
Ministry of Information says that country's dish ban will likely be repealed by mid to late summer – though not by much. The Ministry will permit a maximum of only 20 satellite channels, and these will be limited to educational and informational programming. (Programmed, or at least edited, by guess who.)

A ban on dishes, however, does not necessarily mean no dishes – and Asia, by far the most prohibitive region, is widely considered a hot bed of investment opportunity.

China, for example, has become the world's biggest draw as everyone from **Tele-Communications Inc.** to **Time Warner** to **General Instrument** to – you-fill-in-the-blank – hopes to unlock that country's estimated 195,000,000 television households.

Likewise, India continues to draw a good deal of attention due to its rising standard of living as reflected in some 48,000,000 TV households. Despite the government's disapproval, DTH households garner an estimated 4.9% market share with a 1.04% market penetration.

Among the companies seeking to



strictly accurate, but the concept certainly works: As communications have increasingly linked the global village, the villagers have come to demand more freedom.

Thus such easily-forgettable tune meisters as **Christopher Cross** and **Wham!** may be partially credited for the democratic fervor that continues to open borders. (As well as for the Chinese government's heavy hand clamping down on DTH shortly after Mr. **Rupert Murdoch** made some ill considered remarks about the link between communications and democratization.)

ERUPT WITH U.S. ACTIVITY

tap the Indian market are **NBC International** and **ABC**. The NBC group hopes to market its NBC Superchannel and its **CNBC** business channel via a deal with **Times of India**. ABC, meanwhile, has signed a deal with **First Serve Entertainment** to have some of its programming carried on **Doorsarshan**, India's state broadcaster.

After China and India, Latin America is considered a hot prospect a la DIRECTV's (or, more properly, sister company **Hughes Aircraft Co.**) recent partnership with the Cisneros Group of Venezuela, **Televisao Abril** of Brazil and Mexico's **MVS Multivision**. Hoping to tap the region's estimated 75 million television-viewing households, the Latin DIRECTV plans to offer 144 video and 60 audio channels via

DSS equipment compared to that used in the United States. (Hughes is also planning forays into Asia.)

Other U.S. video-related companies deeply involved in Latin America include **General Instrument** and all major programmers.

Mexico and Canada are also on U.S. programmers' and equipment makers' wish list. Unfortunately, slow moving government policy and the devalued peso in the first country and a severe case of U.S.-phobia in the second have stalled both these markets - at least temporarily. **Power DIRECTV** still hopes to gain a foothold in the Canadian market and, if it does, others will rush north.

Europe is logically the best bet for U.S. video programmers and equipment makers seeking profit

abroad - but it's also, quite naturally, the most saturated market. **MTV**, for example, already has 61 million subscribers in Europe (more than its North American total of 59.4 million); **CNN** boasts nearly 67 million European viewers and the **NBC Superchannel** has some 65 million subscribers. Other U.S. programmers with 20+ million European viewers include **TNT** and the **Cartoon Network** (22.3 million) and **ESPN** (58.2 million). **The Discovery Channel**, **Country Music Television**, **The Children's Channel**, **BBC Worldwide** and **Euronews** all have between 6 and 12 million TV households.*

(Sources: *Screen Digest*, Dow Jones news service, Turner International, *Sky-REPORT* research.)

ASIA Dec. 1994	TV HH	DTH HH	DTH Share	DTH Penetr'n
Australia	5,600,000	20,000	0.20%	0.36%
China	195,000,00	70,000	0.70%	0.04%
Hong Kong	1,600,000	5,000	0.00%	0.31%
India	48,000,000	500,000	4.90%	1.04%
Indonesia	20,000,000	600,000	5.90%	3.00%
Japan	42,000,000	8,100,000	79.60%	19.29%
Malaysia	3,400,000	40,000	0.40%	1.18%
New Zealand	1,200,000	-	-	-
Philippines	7,000,000	30,000	0.30%	0.43%
Singapore	700,000	0	0.00%	0.00%
South Korea	11,000,000	550,000	5.40%	5.00%
Taiwan	5,200,000	230,000	2.30%	4.42%
Thailand	10,000,000	30,000	0.30%	0.30%
TOTAL	350,700,00	10,175,000	-	2.90%

THE LURE OF ASIA:
350 MILLION TV HH,
GROWING FAST



(Source: *Screen Digest*, March 1995)

DSS Drives \$200M Sales

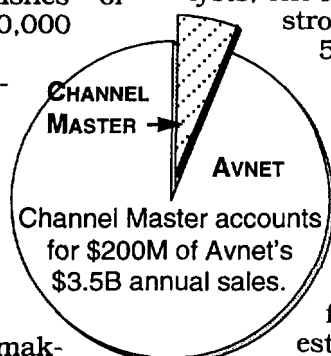
AVNET Inc.

Avnet Inc., a New York-based electronics distributor and (to a lesser degree) manufacturer, has interests in the direct-to-home business via its **Channel Master** division in Smithfield, North Carolina.

Although company officials cannot confirm the reports, Channel Master is widely known as the manufacturer of DSS dishes – of which an estimated 800,000 had shipped by mid-April. As the DSS business has grown, Channel Master has manufactured only a small number of C-band dishes for commercial applications.

In the last year Channel Master had sales of \$200 million – making it a 6% part of Avnet's \$3.5 billion sales pie.

On the whole, the past year has been a fair one for the corporate parent. For the six months ended 12/31/94, company-wide sales increased by 15% to \$1.99 billion, and net income before an accounting change rose 78%, or \$60 million.



Part of these rising fortunes are attributed to the company's several key acquisitions over the past two years. Looking to the future, *Susan Byrne*, founder and CEO of **Westwood Management Corp.**, has ranked Avnet as a company which should enjoy "strong growth" in the months ahead. In analyses from nine separate analysts, one ranked Avnet as a strong buy, 3 as a buy and 5 as a hold.

In earnings per share estimates, analysts expect the fiscal year-end (June 30th) 1995 EPS to reach a median of \$3.00; 1996 EPS is forecast at \$3.50 while the five-year growth rate is estimated at 15%. The EPS from June 30, 1994 was \$2.16, up from \$1.91 in 1993.

For the year ended 12/31/94, Avnet had liabilities of \$803,445,000, with some 41% of that in long-term debt. The company's operating cash flow for the quarter ended 12/31/94 was (\$4.583 million) down from (\$79.916M) the previous year.

SkyWatch

100 Canal Mill Road

Great Neck, NY 11021

Phone: 466-7000

Chairman & CEO: Leon Machiz

PER SHARE

52-Week High	\$42.75
52-Week Low	\$30.75

Last Quarter

Revenue	\$23.98
Earnings	\$0.74

Last Four Quarters

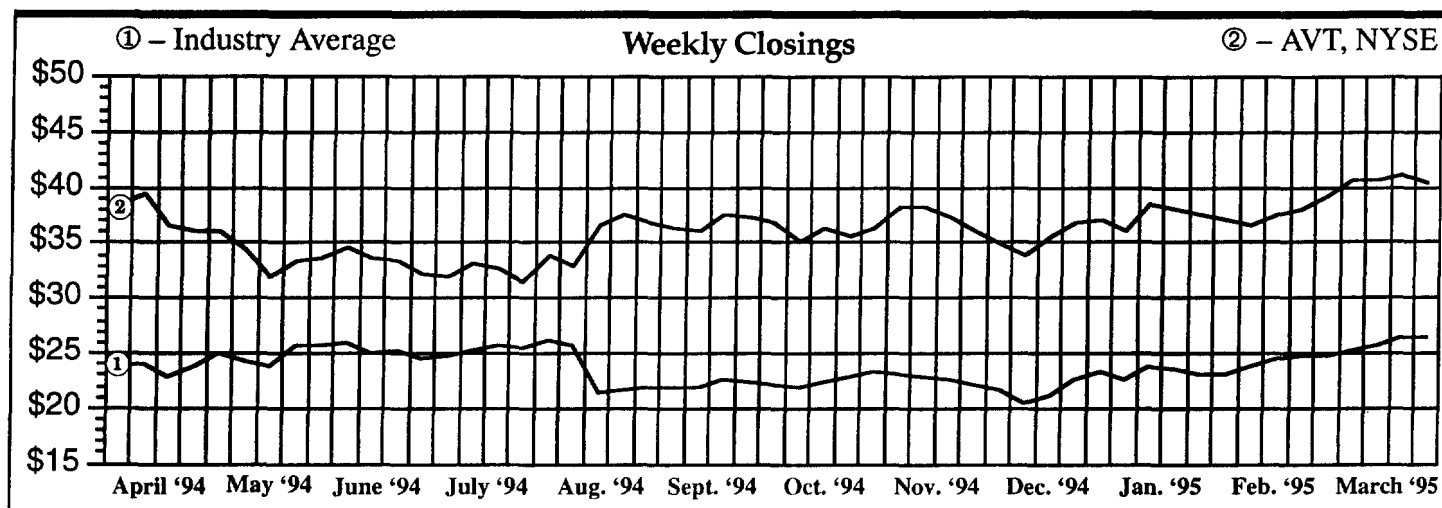
Revenue	\$90.52
Earnings	\$2.76

GROWTH RATES

	1-Year	3-Year
Revenue	58.5%	26.8%
Earnings	13.2%	7.9%
Dividend	0.0%	0.0%

TOTAL REVENUES

1994	\$3,547,743
1993	\$2,237,954
1992	\$1,759,008



Rebound Drives Stock Up California Amplifier

SkyWatch

Chairman & CEO, Ira Coron

PER SHARE

52-Week High \$8.38
52-Week Low \$3.13

Last Quarter

Revenue \$2.08
Earnings \$0.13

Last Four Quarters

Revenue \$8.01
Earnings \$0.28

GROWTH RATES

	1-Year	3-Year
Revenue	13.6%	41.8%
Earnings	-53.0%	-7.0
Dividend	NM	NM

TOTAL REVENUES

1994	\$40,664,000
1993	\$35,785,000
1992	\$20,634,000

California Amplifier stock suffered considerable damage in 1994 — but the market is treating the equipment manufacturer more kindly now, and this strong-buy recommended (by one analyst) stock could see the white glove treatment to continue for at least the next year.

California Amplifier manufactures microwave amplifiers and subsystems for radar, missile tracking and electronic counter-measure systems.

In the home satellite business, which still accounts for a substantial chunk of revenue despite sales increases due primarily to wireless cable products, Cal Amp sells feedhorns and LNBs. Its LNB line includes a digital LNB with both radio and compressed video applications.

The company's latest technological developments have included Multicipher products, which are inexpensive encryption systems for wireless cable broadcasts. Boosting the success of this product is a \$3.5M contract with **Thai Sky Cable TV Co.**, a wireless cable operator in Bangkok, Thailand. California Amplifier said that

future contracts are expected as Thai Sky's subscriber base continues to grow.

Cal Amp's nearly 70% stock price drop over the six months between November 1993 and May 1994 was caused by a variety of factors. In explaining the company's upturn since that time, however, company observers generally point to the arrival of Ira (Ike) Coron as chief executive officer in March of 1994 as well as is the involvement of **Arthur Anderson & Co.** to "improve operating efficiencies" at the company.

However, even with its successes on Wall Street, all is not sunny yet. The company's earnings have been offset by additions, direct selling, bad debt and the expansion of the product line over the past year.

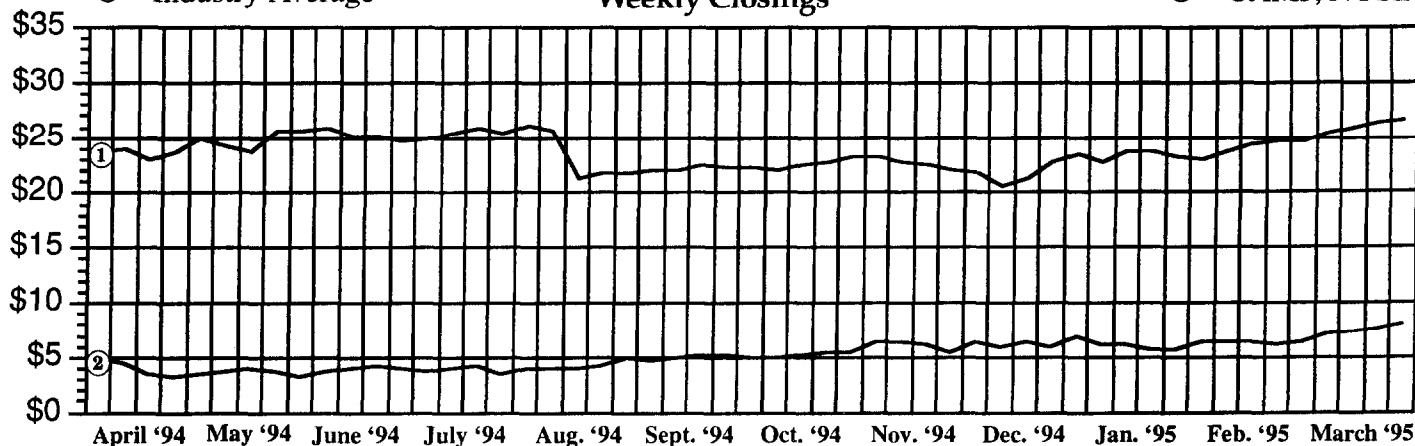
The net income for the quarter ending in November 1994 was \$714,000, a \$156,00 increase from November 1993, but depreciation was \$338,000 higher in the same period 1994 as opposed to '93.

Cal Amp employs 337 people and has a market capitalization of \$46.22 million. •

① - Industry Average

Weekly Closings

② - CAMP, NYSE



The Mouse and the Lion Roar

The Walt Disney Company

Despite media-hyped management turmoil at once-stable **Disney**, the company remains among the most formidable software (content) companies. With *Pocahontas* arriving in theaters this summer, we can expect *The Lion King Redux* when it comes to marketing and marketing strategies ... though it is hard to imagine another success on the level of *The Lion King* for anyone, anytime, anywhere (and that includes former Disney golden retriever *Jeffrey Katzenberg*).

Disney may need the quite politically correct *Pocahontas* to counter the minor effects of **Miramax's** *The Priest*. Legacies of the old Catholic Church's Legion of Decency are busy organizing boycotts and protests of the dark Disney release now in some theaters. The art house movie, though, should do little to diminish Disney's family entertainment brand.

The Disney Channel remains aggressive in developing new avenues of distribution. It was one of the first services to make a programming distribution deal with **EchoStar**, set to launch later this year. The channel is also

available via **DIRECTV**, **PRIMESTAR** and various C-band program packagers.

Still, the heli-skiing death of *Frank Wells* at Nevada's Ruby Ranch last April continues to dominate the management restructuring of the company. *Richard Frank*, head of television and telecommunications, was replaced by programming green-horn *Dennis Hightower* just recently. But Hightower likely won't be a novice for long. A well-respected executive, Hightower will help Disney grow overseas and in other emerging markets.

With Frank on his own, Katzenberg now a part of **SKG Dream-Works**, former home video head *Bill Mechanic* at **Fox** and other executive changes, the Street's focus will be on how well studio head *Joe Roth's* movies perform and how well *Roy Disney's* animation unit does with *Pocahontas*.

No analyst, though, would sell the stock. Of the 25-plus Wall Street analysts who regularly follow the stock, most would buy; 40% put it at a "strong buy." Even with continuing problems at Disney's Paris theme park, the Mouse and Lion still roar. •

SkyWatch

200 South B...

...

...

Chairman & CEO: Michael Eisner

PER SHARE

52-Week High \$56.25

52-Week Low \$37.75

Last Quarter

Revenue \$6.26

Earnings \$0.91

Last Four Quarters

Revenue \$19.65

Earnings \$2.28

GROWTH RATES

	1-Year	3-Year
Revenue	17.9%	18.1%
Earnings	65.2%	19.5%
Dividend	19.8%	19.1%

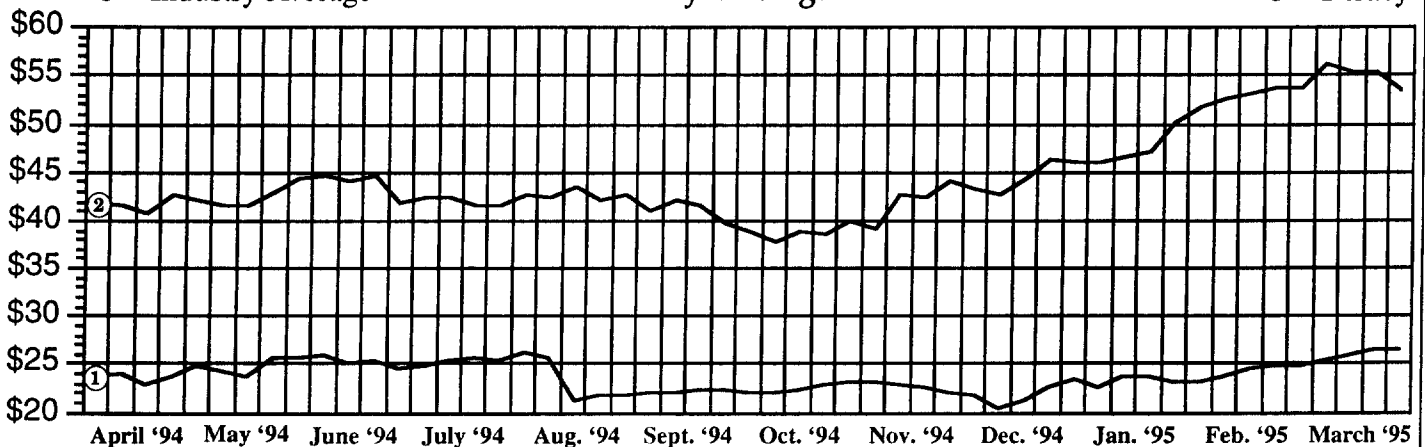
TOTAL REVENUES

1994	\$10,055,100,000
1993	\$8,529,200,000
1992	\$7,504,000,000

① - Industry Average

Weekly Closings

② - Disney



Migrating to a Digital World

General Instrument Corp.

SkyWatch

181 West Madison Street

Chicago, IL 60601

616-221-1000

Chairman & CEO: Daniel A. Johnson

PER SHARE

52-Week High \$36.25

52-Week Low \$21.25

Last Quarter

Revenue \$4.36

Earnings \$0.70

Last Four Quarters

Revenue \$16.50

Earnings \$2.01

GROWTH RATES

	1-Year	3-Year
Revenue	46.23%	37.39%
Earnings	172.53%	172.53%
Dividend	NM	NM

TOTAL REVENUES

1994	\$2,036,323,000
1993	\$1,392,522,000
1992	\$1,074,696,000

General Instrument once single-handedly ruled the direct-to-home receiver/de-coder marketplace. It no longer does ... but that isn't all bad news, by a long shot.

If you want to watch scrambled programming via your C-band dish, you have to go through GI in one way or another. If you are a cable subscriber, odds are the converter you use was supplied to your cable operator by GI. If you are a **PRIMESTAR** subscriber, you use a GI DigiCipher.

But if you go to your local **Circuit City** to buy a box and a dish, you won't get one from GI. Instead, you can pick from **RCA** or (very soon) **Sony** or (pretty soon) **Hughes** or (somewhat soon) **Toshiba** or **Uniden**.

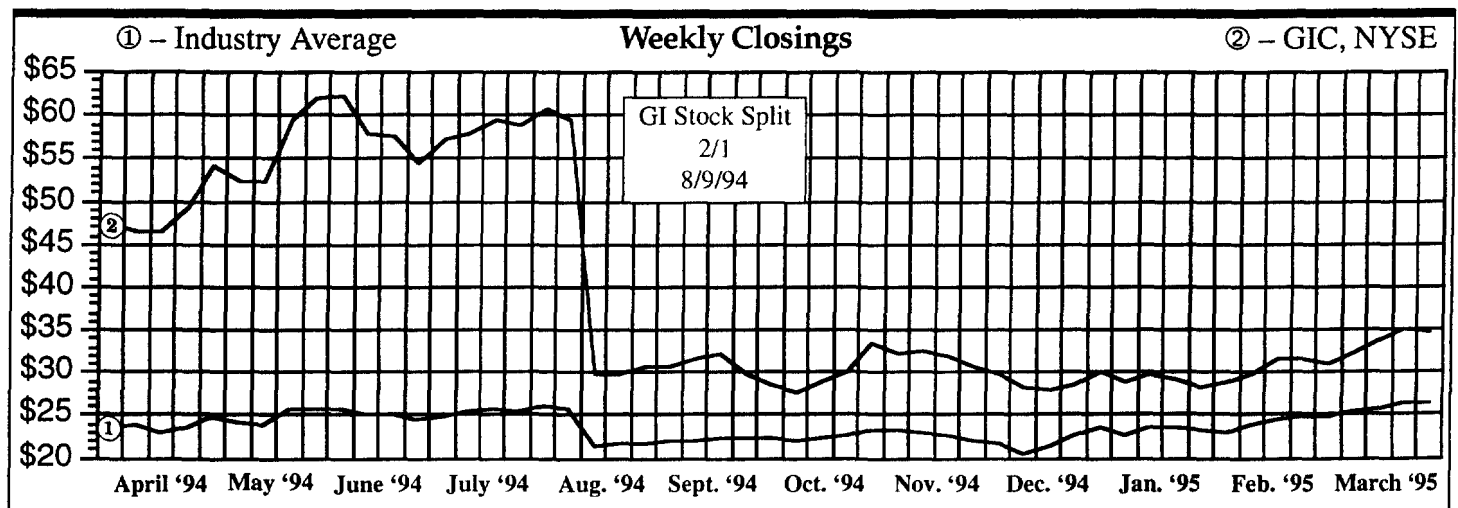
GI's distribution model has been built upon the experiences in the cable television industry, which GI clearly dominates for set-top boxes. The model means GI serves fewer customers (MSOs and systems) and makes it a business-to-business marketer of product. It's new competitors are consumer electronics manufacturers and distributors.

As an aside, it is interesting to note that Zenith, the only consumer electronics manufacturer to attack GI's main market, has continued to stumble in cable. Whether or not GI could gear up to compete via the other retail outlets is not clear.

GI, though, has strong commitments from **GI General Instrument** cable operators to bring digital compression to cable ... but has not yet been able to deliver the boxes. Instead, it seems to be using **PRIMESTAR** to learn more about the business of being digital as it supplies **PRIMESTAR**'s current 36-inch mid-range models and plans to segue with the programmer into a higher-powered satellite/smaller dish/higher channel number service in 1996.

In addition, of course, the C-band industry continues to grow (albeit at a somewhat slower pace), helping to prop up stock prices.

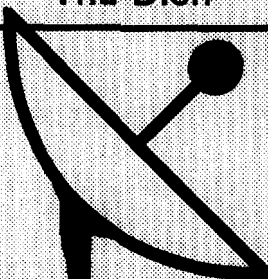




On the whole, analysts continue to be positive on GI, with most counting it a "buy" or "strong buy" citing strong revenue and earnings growth.*



As the direct-to-home business continues its upward climb, satellites of all types are planting invisible roots in geosynchronous orbit some 22,300 miles above the earth. At the same time, dishes of all sizes are blossoming in backyards, making those once pundit, now visionary, declarations of 10 million dishes in existence by the end of this century look increasingly realistic.

To date, working C-band dishes can be found in some 4,000,000 backyards across the United States. Much smaller **PRIMESTAR** dishes occupy approximately 330,000 households, and the smaller-still DSS dishes grace over 500,000 backyards, porches and rooftops – making for more than 4,830,000 working home

Crowded

THE DISH	BACKGROUND	KEY CONTACTS
	C-BAND The traditional home satellite service grew from a home made system in 1976 to nearly 1.7 million U.S. satellite systems by the end of 1985. The first scrambled signals in 1986 sent the industry reeling. By March 1995, however, the "full-view" dish served an estimated 4 million customers.	More than 1,000 retailers, distributors, equipment manufacturers and programmers have interests in this \$2.5+ billion industry. A key contact is: <u>The Satellite Broadcasting & Communications Association</u> Tel: 703/549-6990 Fax: 703/549-7640
	PRIMESTAR PRIMESTAR began in late 1990 as a cable-company attempt to reach rural customers and beat other DBS services to the market. By early 1994, PRIMESTAR had 70,000 customers on its 12-channel analog service. As DSS moved into the market, PRIMESTAR – which now boasts some 330,000+ customers – has radically changed its original game plan.	PRIMESTAR is owned by six cable TV companies, including Comcast, Continental, Cox, Newhouse, TCI and Time Warner, plus GE Americom which provides the DBS service's Ku-band satellite. The key contact for PRIMESTAR is: <u>PRIMESTAR Partners</u> Tel: 610/617-5300 Fax: 610/617-5312
	DSS The Digital Satellite System is the brain child of Hughes Electronics' DIRECTV and Thomson Consumer Electronics. With a service debut (along with Hubbard Broadcasting's USSB) in June of last year, the DSS service had signed some half-million subscribers by the end of March 1995.	<u>DIRECTV</u> Tel: 310/535-5000 Fax: 310/535-5225 <u>Thomson Consumer Electronics</u> Tel: 317/267-5000 Fax: 317/587-6765 <u>USSB</u> Tel: 612/645-4500 Fax: 612/642-4578
	ECHOStar EchoStar president Charlie Ergen has long had a hankering for his own DBS service, which he has set for launch in late 1995. Because of satellite launch and manufacturer problems, however, several industry hands doubt whether he can meet this schedule.	EchoStar is part of the privately held EchoStar group of companies which deliver DTH products and services worldwide. For information, call: <u>EchoStar Communications Corp.</u> Tel: 303/799-8222 Fax: 303/790-4447
	ALPHAStar In an announcement at the SBCA winter show, Al Bahnman, president of Canada's Tee-Comm announced his intentions to join the U.S. DBS race with AlphaStar set to launch in early December of this year.	Tee-Comm, which is also a partner in the Canadian ExpressVu DBS service, can be reached at: <u>Tee-Comm Electronics Inc.</u> Tel: 905/878-8181 Fax: 905/878-2472

Skies?

satellite systems to watch 45+ satellites.

In the future, look for more dishes and satellites to crowd into our lives.

Today's DBS services are adding a combined total of nearly 5,000 customers per day, and new DBS ventures are already knocking on doors in preparation for launch. (And all this just in the United States; DTH is a bigger business still internationally.) Meanwhile, C-band services continue to maintain steady, if a tad slowed, growth.

All this activity makes for a good deal of who-does-what-with-whom-for-how-much-and-when confusion. In an attempt to clear out at least some of the muddle, we offer the chart below:

EQUIPMENT	PROGRAMMING
<p>The C-band industry currently uses analog signals beamed from some 23 satellites down to dishes which average 7 feet in diameter. At the beginning of 1996, <u>General Instrument</u>, maker of the encryption module used for all scrambled C-band channels, intends to introduce an analog/digital receiver, thus giving the industry the advantage of some digital capabilities. Today's C-band equipment costs around \$2,000 to \$2,300.</p>	<p>C-band dish owners can receive more than 400 channels of programming, of which approximately 115 are scrambled. Some half of the traditional dish viewers buy programming. Of these, 30.3% buy their programming monthly at a mean cost of nearly \$30; almost 70% purchase their programming annually at a mean cost of \$266.</p>
<p>In mid-1994, <u>PRIMESTAR</u> moved from analog to digital service which uses <u>General Instrument's</u> DigiCipher 1 technology, a mid-strength satellite and 3-meter diameter dishes. The equipment is usually leased with an approximate \$150 installation fee. In 1996, <u>PRIMESTAR</u> will move to higher-powered satellites, an array of smaller dishes and DigiCipher 2. This will require visits to all existing subscriber households.</p>	<p><u>PRIMESTAR</u> programming includes virtually all so-called "cable" channels except for the <u>Viacom</u> mix. The service's ad campaign touts a daily cost "starting at \$1" for equipment, service and programming. <u>PRIMESTAR's</u> top programming package runs about \$50 to \$60/month, while its low-end package runs about \$30/month. Pay-per-view movies cost \$3.95 each, and the service reports an average buy rate of more than 100%.</p>
<p>The DSS system, which retails for around \$699 not including installation, uses an 18" dish, compression technology developed by <u>TCE</u>, a conditional access and encryption system developed by <u>News Datacom</u> and satellites from <u>Hughes Aircraft</u>. To date, <u>TCE</u> (via the <u>RCA</u> brand) has manufactured the only receivers available. However, by late spring, <u>Sony</u> will start selling receivers, while <u>Hughes Networks</u>, <u>Toshiba</u> and <u>Uniden</u> will join the DSS market next year.</p>	<p>The DSS system offers its customers approximately 175 channels of programming, 20 of which currently come from <u>USSB</u>. While <u>USSB</u> has the "cable" premium channels from <u>Time Warner</u> and <u>Viacom</u>, <u>DIRECTV</u> offers extensive sports and pay-per-view channels, as well as other basic and premium services. Programming packages range from \$7.95 to \$34.95. <u>DIRECTV's</u> pay-per-view buy rates average about 200% at \$2.99 per buy.</p>
<p><u>EchoStar</u> has announced that it will use <u>Nagra-Kidelski's</u> INTERLOCK system for conditional access. Other equipment manufacturers have not yet been announced.</p>	<p>To date, <u>The Disney Channel</u>, <u>ESPN</u>, <u>USA</u>, <u>Turner Home Satellite</u>, <u>The Discovery Channel</u> and <u>The Learning Channel</u> have signed on with <u>EchoStar</u>, which has long-announced its intention to be a "low-cost" provider.</p>
<p><u>AlphaStar</u> will go up on <u>AT&T's</u> 402R satellite, set for launch later this year. <u>TV/COM International</u> will provide <u>DVC Compression NetWORKS™</u> architecture to deliver <u>AlphaStar's</u> signals, while <u>Tee-Comm</u> will manufacture the 2-foot dishes, remote controls and digital set top boxes.</p>	<p>By press time, <u>AlphaStar</u> had announced no programmer agreements.</p>

Will GMH Spin Off DIRECTV? Hughes Electronics Corp.

General Motors has been on a roll lately, apparently beginning a real turnaround at its core North American auto operations, but the big news has been in the "H" group of GM companies. So much more positive has been happening at the former **GM Hughes**, now just **Hughes Electronics Corp.**, that it not only changed its name (to boost its stock values) but rumors are rampant that it may try to cash in on the runaway success of its **DIRECTV** launch by spinning the DBS unit off into its own public entity.

That may or may not happen (speculation persists despite repeated denials), but there is no escaping the fact that DIRECTV's launch has fueled the biggest upturn in the consumer electronics business in years. The 18-inch DSS system has driven sales of upmarket television sets, including big screens and home theater configurations, past everyone but **RCA's** business plans.

The second supplier of DSS dishes and IRDs enters the market in just a few weeks (**Sony**), with three more on the horizon: **Uniden America**, **Toshiba America** and

Hughes Network Systems (yes, a DIRECTV affiliated company). All four have licensing agreements with **Thomson Consumer Electronics** (RCA's French parent) and **News Datacom**, the DSS developers. RCA's next generation IRDs and dishes should be in the marketplace by year's end as well.

The increased supplier group suggests the market will grow even more dramatically as price and feature differentials enter the equation. Behind the marketing and sales strategies of DIRECTV and its partners, including **USSB**, lies a significant battleground between cable television and direct-to-home multichannel video program distributors: the battle of who pays for the box (or converter, or IRD). Hughes Electronics is thus at the forefront of a potential trend shifting the control of the receiver units to the consumer – and the open network architecture that will allow the development of other services to flourish, much as the Carterphone decisions opened the telephone peripheral and service markets.

In recent analyst rankings, GMH received two strong buys, three buys and three holds. •

SkyWatch

100 Hughes Electronics

100 Hughes Electronics

100 Hughes Electronics

GMH Chairman & CEO: C. M. Armstrong

PER SHARE

52-Week High \$41.75

52-Week Low \$31.00

Last Quarter

Revenue \$8.39

Earnings \$0.61

Last Four Quarters

Revenue \$35.46

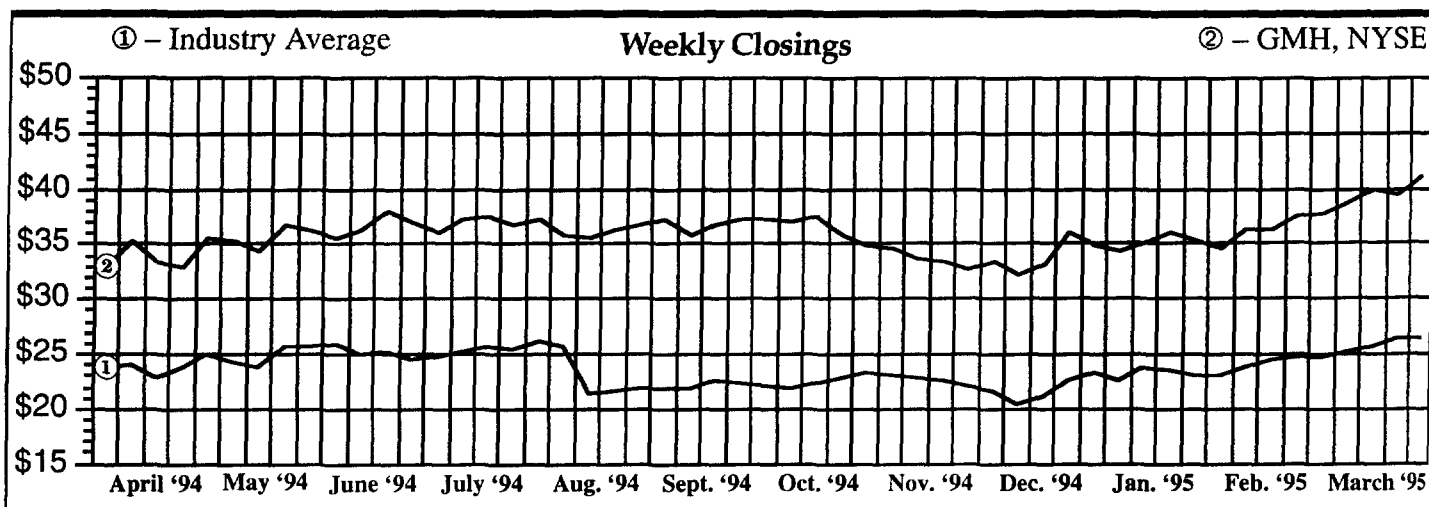
Earnings \$2.75

GROWTH RATES

	1-Year	3-Year
Revenue	9.9%	4.9%
Earnings	NM	8.3%
Dividend	0.0%	0.0%

TOTAL REVENUES

1994	\$14,099,000,000
1993	\$13,517,500,000
1992	\$12,297,100,000



Spicing Up & Spicing Down Graff Pay-Per-View, Inc.

SkyWatch

C. J. BROWNE		
NATIONAL ASSOCIATION		
OF REALTORS		
Chairman & CEO, J. Roger Ebert		
PER SHARE		
52-Week High	\$11.75	
52-Week Low	\$6.13	
<u>Last Quarter</u>		
Revenue	\$1.00	
Earnings	\$0.11	
<u>Last Four Quarters</u>		
Revenue	\$3.59	
Earnings	\$0.00	
GROWTH RATES		
	<u>1-Year</u>	<u>3-Year</u>
Revenue	39.9%	32.1%
Earnings	NM	NM
Dividend	NM	NM
TOTAL REVENUES		
1994	\$40,400,000	
1993	\$14,682,000	
1992	NA	

With a recent "strong buy" ranking, several new acquisitions and moves to both spice up and spice down its programming, **Graff Pay Per View** expects healthy growth in 1995 and beyond.

In recent months, Graff has acquired the British pay-TV network **Home Video Channel**; it has agreed to acquire **Adam & Eve**; and the company has announced plans to jointly develop gaming shows with **Multimedia Games Inc.** All this will be added to the company's existing **Spice Inc.**, which offers adult fare and its **Cable Video Store Inc.**, which focuses on box office hit films and special events.

Looking to the future, CEO J. Roger Faherty has said that he is "comfortable" with estimates that the company will earn \$0.58 per share on 1995 revenue of \$60 million. 1994 revenue was \$40.4 million or \$0.37 a share.

While the adult market is traditionally one of the strongest (if least mentioned) pay-per-view segments, a recent combination of religious-right fervor and the

increasing importance of overseas markets such as Saudi Arabia makes this strategy risky. Thus Faherty has increased emphasis on less spicy markets.

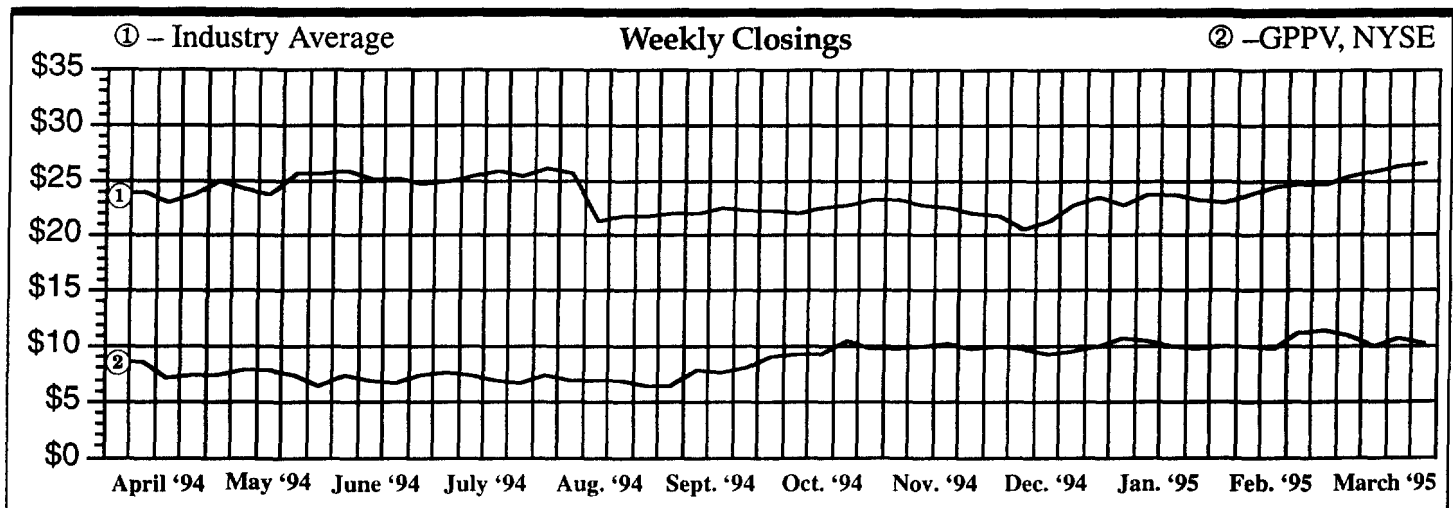
In a *Wall Street Journal* article he recently noted, "As our revenues grow, we'll see a smaller percentage coming from Spice." Spice currently accounts for 50% of Graff's revenue.

In fact, Graff plans further diversification through a joint venture with **Phillips Media** and **Dutch PTT** in Europe, as well as additional international expansion in Asia and Latin America.

For future U.S. growth, Faherty sees increased involvement in satellite and video dial-tone delivery.

For the quarter ended September 30, 1994, Graff reported a net income of \$1.106 million versus (\$483,000) for the same period in 1993. Operating cash flow for the period was (\$2.003 million) versus \$258,000 in 1993.

With 8,999,168 shares issued and a closing price of \$10.63 per share as of March 30th, Graff Pay-Per-View's market capitalizations stood at \$95.661 million.*



Moving the Brand to Movies, Too International Family Entertainment

Next up for the company that takes family values very seriously, indeed, will be movies. In fact, **International Family Entertainment** believes it has a nascent brand that can be every bit as powerful as **Disney's**. And, they just may be right.

Company CEO **Tim Robertson** recruited the respected and successful programmer/producer **Tony Thomopoulos** to run his entire programming activities. That includes the **MTM** studios, the **Family Channel**, **Cable Health Network** and the **Family Channel Movies**. The veteran Thomopoulos should allow International Family to cost-effectively develop programming for the broader movie market as well as wholly-owned shows for its channels.

International Family has quite successfully migrated the Family Channel from its **Christian Broadcast Network** foundation into a mainstream entertainment channel, albeit one without any salaciousness. The use of reruns of family fare and the importation of Canadian programming in joint production deals has allowed the Family Channel to steadily, but

not spectacularly, increase its ratings. **The 700 Club** program, co-hosted by International Family Chairman and past presidential candidate **Pat Robertson**, remains a daytime staple, however.

The Family Channel also enjoys near universal availability on cable systems and is carried on **PRIME-STAR** and **DIRECTV**. It's also available, of course, via C-band and is scrambled.

The Cable Health Network is still in the start-up phase. With digital compression expansion slower than expected in cable system upgrades, the channel will have to rely upon satellite delivery for immediate subscriber gains.

A significant portion of International Family stock is held by **Gabelli Funds** (8%) and **Liberty Media**, the **TCI** programming arm.

Of analysts tracking the company, only one maintains a "strong sell" position. Others are more bullish with three of the five active tracking analysts recommending a "buy" or "strong buy."

The company's target remains the so-called baby boomer families with a predominantly suburban demographic including children. •

SkyWatch

PER SHARE

52-Week High	\$17.50
52-Week Low	\$12.13

Last Quarter

Revenue	\$2.16*
Earnings	\$0.13*

Last Four Quarters

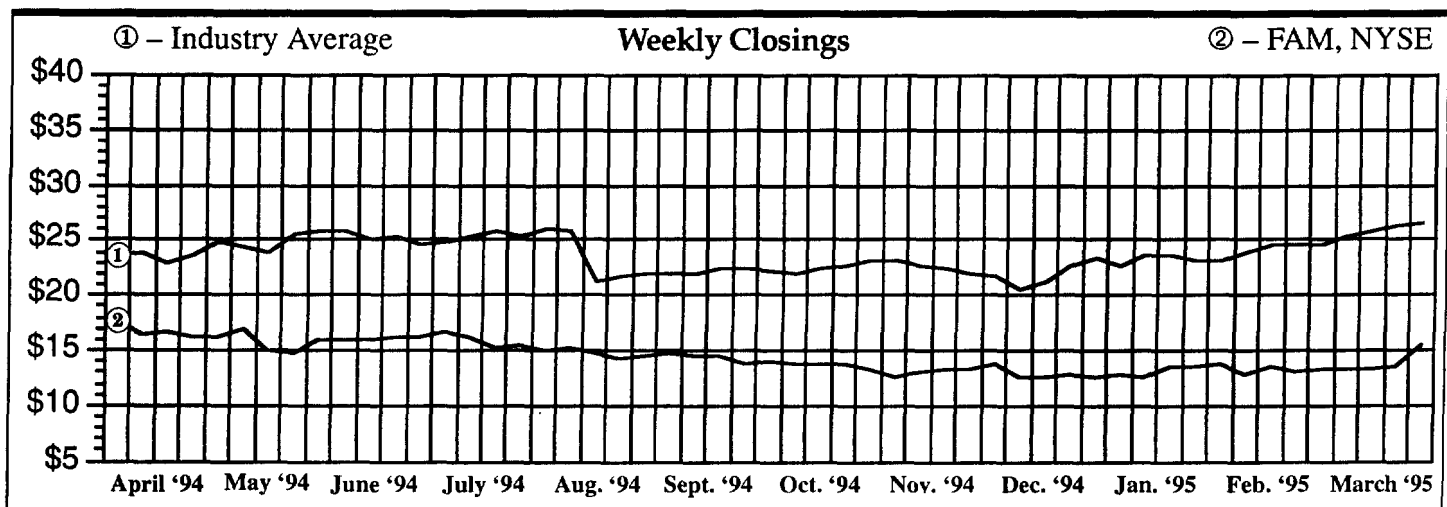
Revenue	\$6.85*
Earnings	\$0.38*

GROWTH RATES

	1-Year	3-Year
Revenue	56.2%	30.6%
Earnings	-30.0%	-18.7%
Dividend	NM	NM

TOTAL REVENUES

1994	\$242,050,000*
1993	\$208,216,000
1992	\$133,301,000
	*Preliminary



The Usual Blistering Pace Tele-Communications, Inc.

SkyWatch

President & C.O. John Malone

PER SHARE

52-Week High	\$25.00
52-Week Low	\$18.25

Last Quarter

Revenue	\$9.05*
Earnings	\$0.03*

Last Four Quarters

Revenue	\$11.36*
Earnings	\$0.08*

GROWTH RATES

	1-Year	3-Year
Revenue	16.2%	12.2%
Earnings	NM	NM
Dividend	NM	NM

TOTAL REVENUES

1994	\$4,963,000,000*
1993	\$4,153,000,000
1992	\$3,574,000,000

*Preliminary

Besides "helping" Barry Diller more than quadruple his personal investment in **gvc** (now a partnership of **TCI** and **Comcast**), **John Malone** and Tele-Communications' relentless deal-making machinery continued to move at a blistering pace to expand its control of cable television subscribers around the world, grow and expand its myriad programming investments and aggressively move forward in satellite entertainment.

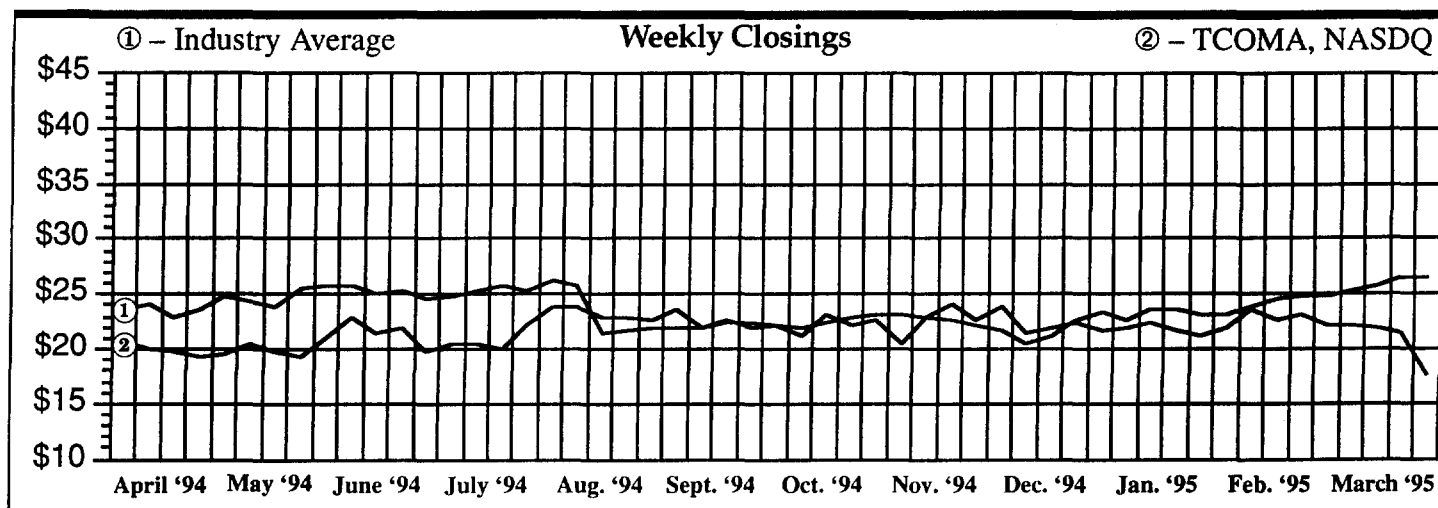
TCI's position in **PRIMESTAR Partners, L.P.** makes it a primary player in the direct-to-home universe ... as does its distribution agreements for its wholly- and partially-owned programming networks. **Encore**, for example, is passing six million subscribers while each of its multiplexed channels is moving rapidly from a half million subscriber base to a million; primarily because of **PRIMESTAR** and **DIRECTV** distribution.

Liberty Media's sports and pay-per-view activities are accelerating as well. The regional "Prime" sports channels with a variety of names are coalescing into a sports programming powerhouse to chal-

lenge the genre dominance of **ESPN** (an operational unit of **Cap-Cities/ABC** partially owned by **Hearst**).

Liberty's PPV unit, **Reiss Media's Request TV** (in partnership with **20th Century Fox**), is in nearly final discussions with **Viewer's Choice** (the partnership of **Time Warner**, **Viacom**, **Cox**, **Continental**, **Comcast** and, because of a cable system acquisition, **TCI** itself) to combine the two leading cable-distributed PPV services. Presumably, that would also result in a beefed-up **PRIMESTAR** presence. (Long time vocal PPV advocate, Warner's **Eddie Bleier**, seems to have been right: more channels, more buyers. So DTH providers with channel capacity are moving rapidly toward a real **NVOD** philosophy.) It's also interesting that programmers with major TCI investments, **Discovery** and **Family**, are moving rapidly into the movie business. It won't be long before TCI can premiere a major movie on PPV as it has long wished.

Meanwhile, TCI is moving aggressively on the international front in both (See TCI, Page 35)



Diving into the DBS Race -- Twice Tee-Comm Electronics

Within the past few months, Canada's **Tee-Comm Electronics Inc.** has jumped with both feet into the DBS business, both Canadian and U.S. style.

The first foot landed early this year as Tee-Comm joined **BCE Inc., Canadian Satellite Communications** and **WIC Western International Communications Ltd.** to form **Expressvu**.

The new service aims to thwart **DIRECTV's** attempt to gain Canadian subscribers via **Power DIRECTV**. (Because it does not have a Canadian satellite, Power DIRECTV has yet to gain regulatory approval, but this situation could change in the near future.)

Back to Expressvu: Tee-Comm is set to supply the consumer equipment (via **TV/COM** technology) for the new service. Expressvu expects to begin service later this year with an initial 100 channels aimed at an estimated 1.5 million Canadian audience.

Not content with Canada alone, Tee-Comm Chairman and CEO **Al Bahnman**, promptly set another foot in DBS via **AlphaStar**, a new U.S.-aimed offering announced at

the SBCA's Winter Show in March.

Says Bahnman of the new service, "Consumers are demanding more choices from more sources, and AlphaStar's business potential lies in securing a growing slice of a rapidly expanding DTH pie."

Despite the irony of a Canadian company taking double dip advantages of Canada's prohibition of similar U.S. services, industry insiders generally give thumbs up to AlphaStar, thanks in large part to its ties to **AT&T** (it will initially broadcast from that company's Telstar 402R satellite) and **TV/COM**, with its links to European giants **Irdeto** and **Nokia**.

Barring a delay in the Telstar 402R (which may become hostage in an **AT&T/Martin Marietta** battle), AlphaStar is slated to begin this December with 100 still unknown programming channels.

Despite strong revenue growth on an annual basis, Tee-Comm's fourth quarter, 1994, proved dismal as revenues dipped nearly 90% from the previous year. The company attributed this plummet to lower margins brought on by a sales mix of less-profitable products.

SkyWatch

TEECOM INC. (NYS: TEE)
NYSE LISTED
Chairman & CEO: Al Bahnman

PER SHARE

52-Week High \$7-1/8
52-Week Low \$1-15/16

Last Quarter

Revenue \$11,360,000
Earnings \$ 21,300

Last Four Quarters

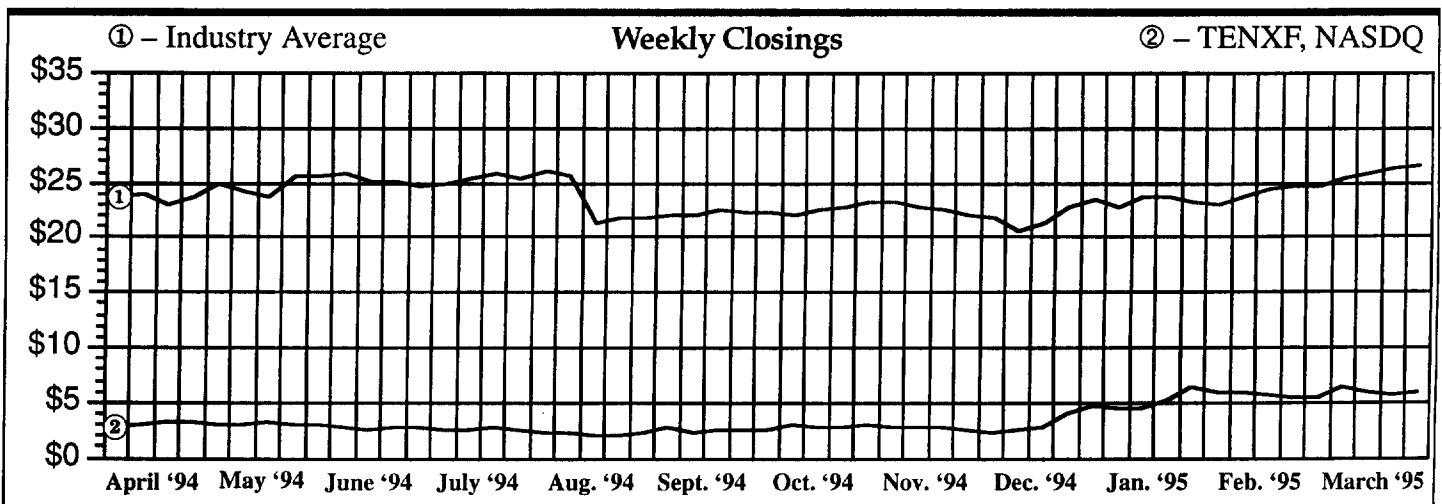
Revenue \$48,990,000
Earnings \$ 1,113,280

GROWTH RATES

	1-Year	3-Year
Revenue	54%	NA
Earnings	578%	NA
Dividend	NA	NA

TOTAL REVENUES

1994	\$49,200,160
1993	\$31,935,090
1992	\$26,679,670



Content and Conduit Time Warner

SkyWatch

Chairman & CEO: Gerald Levin		
PER SHARE		
52-Week High	\$40.63	
52-Week Low	\$31.50	
<u>Last Quarter</u>		
Revenue	\$7.65*	
Earnings	\$0.02*	
<u>Last Four Quarters</u>		
Revenue	\$22.34*	
Earnings	\$-0.28*	
GROWTH RATES		
	<u>1-Year</u>	<u>3-Year</u>
Revenue	-49.7%	-17.02%
Earnings	NM	NM
Dividend	16.9%	7.4%
TOTAL REVENUES		
1994	\$ 9,700,000,000*	
1993	\$ 6,581,000,000	
1992	\$13,070,000,000	
*Preliminary		

One of the biggest software players in the direct-to-home business, **Time Warner**, is also the biggest bettor on the future of multichannel video programming delivered to the home. The company is just about the biggest factor in the production of programming, the packaging of programming and the distribution of programming. And, in any segment it doesn't dominate, it is looking for ways to grow ... or, in the area of games, jettisoning as it hopes to sell off its **Atari** holdings.

HBO, available on satellite via DSS (**USSB**), mid-dishes (**PRIME-STAR**) and big dishes (various programming packagers) has moved aggressively to enhance its lead over smaller rivals **Showtime** and **Encore** by contracting for the movie output of **SKG Dream-Works**.

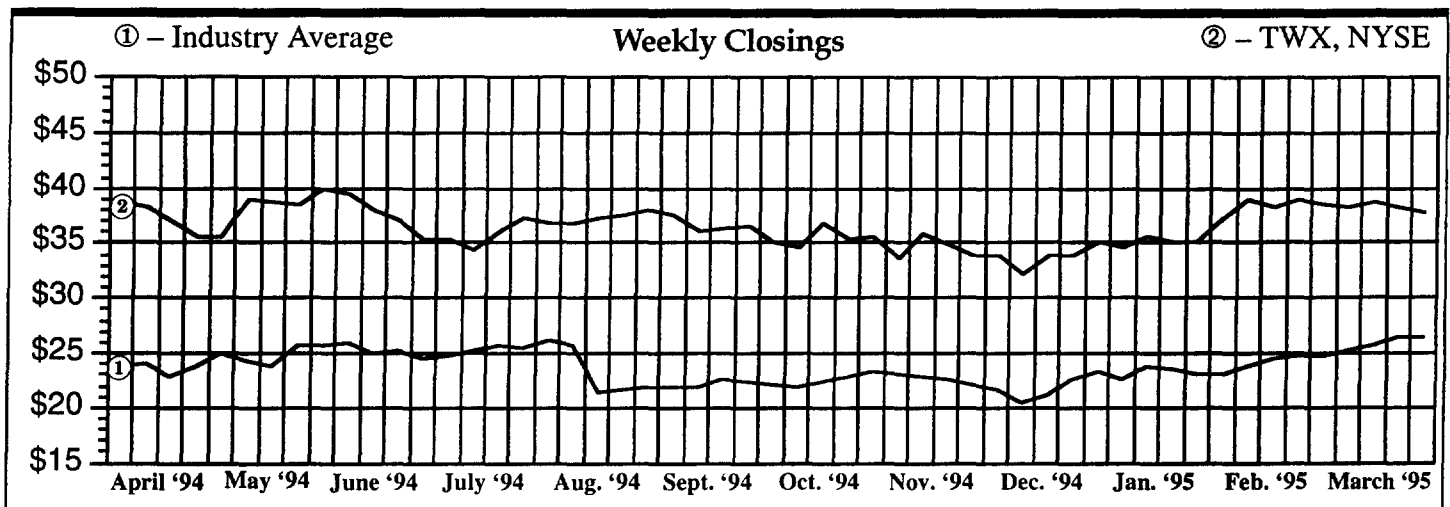
In addition, Time Warner is a partner, with five other cable operators, in **PRIMESTAR** which had passed some 330,000 subscribers by the end of March.

Wall Street continues, however, to give Time Warner and CEO **Gerald Levin** mixed reviews. The

complex balance sheet and the partnerships with, among others, **US WEST** complicate the ability of the company to sometimes move decisively. The on-going (despite recent press reports to the contrary) negotiations to "monetize" Time Warner's investment in **Turner Broadcasting** are just one example of the company's dilemmas. The newest dilemma is named **Edgar Bronfman, Jr.**; his **Seagrams Ltd.** holds almost 15% and now controls rival **MCA**.

Time Warner Cable's Orlando adventure with the Full Service Network, while costing a healthy chunk, should help the company develop interactive TV into something closer to a reality and a business. TWX is already moving to benefit via its proposed investment in an **AT&T/Silicon Graphics** venture to market ATMs.

Its **Warner Brothers** and publishing divisions remain very strong. The development of the **WB Network**, even without a signature program like its new rival **UPN's**, should grow fast. The brands owned by the company remain among the most recognized and trusted in the world. •



Which Network Should Ted Buy?

Turner Broadcasting Systems

The quest for one of the traditional, over-the-air networks continues ... as does the quest to restructure the major ownership question plaguing the company. That is, which "outsider" will wield the most clout. The stutter-step decision making matrix of *Ted Turner*, *TCI's Dr. John Malone* and *Time Warner's Gerald Levin* has left the brilliant but mercurial Turner frustrated.

The original decision to share power - which saved the company and made it the strongest of cable/satellite programmers - is haunting the company as it tries to position itself for the future. But counting Turner out is foolhardy.

Outside of the abortive attempt to start a competitor to **MTV**, Turner has outperformed his critics at every juncture. From the launch of **CNN** to the purchase of the **MGM** library, Turner has been the visionary who produces solid assets. His libraries now are among the world's most powerful. Without them, there would be no **TNT**, no **Turner Classic Movies** and no **Cartoon Network** ... now all major programming assets (and outlets). And without satellite dis-

tribution, **Turner Classic Movies** and the **Cartoon Network** wouldn't be the growing hits they are. Both networks became solid hits on C-band, **PRIMESTAR** and **DIRECTV** before beginning to gain widespread cable coverage.

Turner's move into movies with **Castle Rock**, **New Line** and **Hanna Barbera** seem successful; and will help fuel continued product flow to Turner's networks.

The acquisition of either **CBS** or **NBC** would catapult Turner one rung higher on the ladder of the world's media ranks. And, given the eventuality of *Time Warner* "monetizing" its Turner asset and the continued support of *Dr. Malone* and his financial acumen, some sort of deal seems likely ... later if not sooner.

Turner's **CNN** has long dominated the world's news flow. However, the **BBC** is gearing up to seriously challenge Turner. And it started with *Naked News*, an hour documentary of *Ted Turner* himself. (To be seen on **A&E** in April.) And, as former presidential press secretary *Marlin Fitzgerald* is quoted on *Ted* in the piece: "Crummy politician; great mogul, great billionaire."*

SkyWatch

PER SHARE

52-Week High	\$20.83
52-Week Low	\$14.50

Last Quarter

Revenue	\$2.62
Earnings	\$0.07

Last Four Quarters

Revenue	\$9.79
Earnings	\$0.10

GROWTH RATES

	1-Year	3-Year
Revenue	8.6%	11.3%
Earnings	114%	111.9%
Dividend	40%	-35.4%

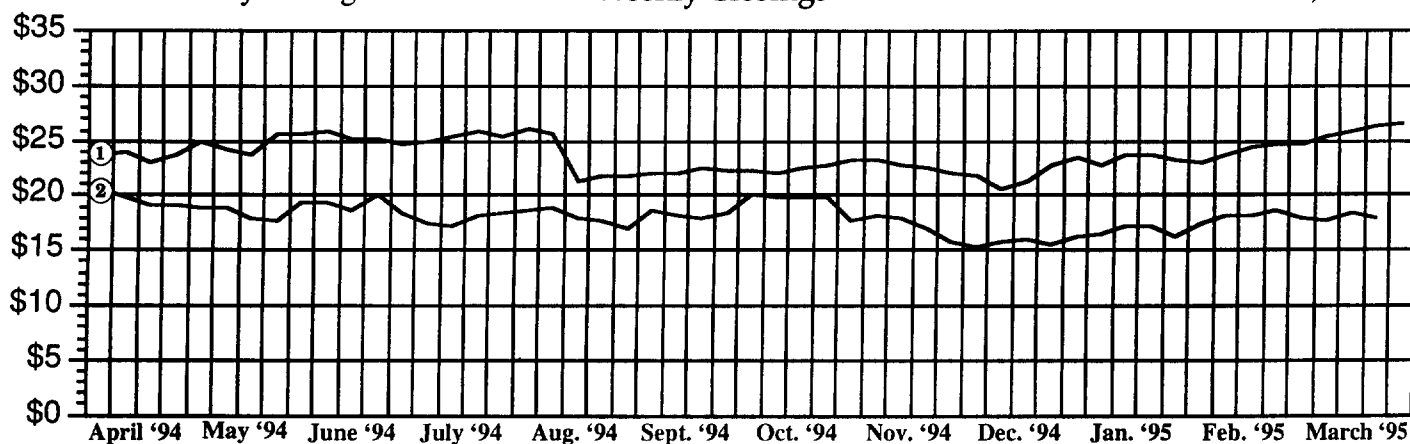
TOTAL REVENUES

1994	\$2,800,000,000
1993	\$1,921,606,000
1992	\$1,769,892,000

① - Industry Average

Weekly Closings

② - TBSB, NYSE



Strong Growth Continues United Video Satellite Group Inc.

SkyWatch

PER SHARE

52-Week High \$27.00
52-Week Low \$10.50

Last Quarter

Revenue \$3.10*
Earnings \$0.27*

Last Four Quarters

Revenue \$10.98*
Earnings \$0.91*

GROWTH RATES

	1-Year	3-Year
Revenue	67.7%	35.5%
Earnings	46.9%	5.0%
Dividend	NM	NM

TOTAL REVENUES

1994	\$196,679,000*
1993	\$114,383,000
1992	\$68,222,000

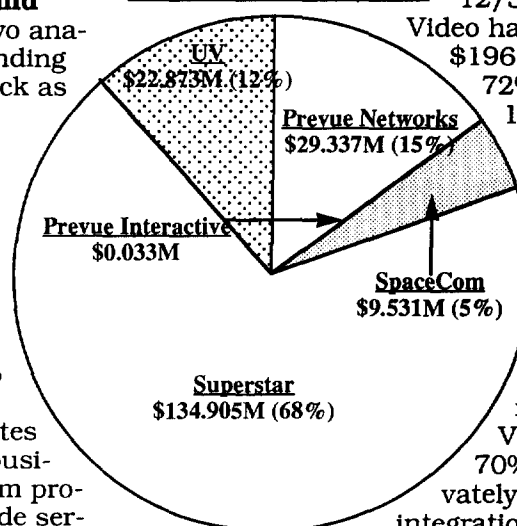
*Preliminary

Coming off a strong 1994, **United Video** continues its good-news bandwagon into 1995 with a small spot on *Garrett Van Wagoner's* coveted **Govett Smaller Companies Fund** plus at least two analysts recommending the UVSGA stock as a "strong buy".

Under the guidance of Chairman and CEO *Lawrence Flinn, Jr.*, who acquired a majority ownership interest in United Video in 1976, the company operates in five related businesses: program promotion and guide services, i.e. the **Prevue** channel and **Sneak Preview**; interactive information delivery services for the cable television market; satellite transmission services for private networks; home satellite dish services through the company's key **Superstar Satellite**

Entertainment division; and satellite distribution of video entertainment services (i.e. three superstations delivered to cable systems).

UVSGA Revenues, 1994



For the year ended 12/31/94, United

Video had revenues of \$196.679 million, a 72% jump from 1993's \$114.383 million. The company's operating cash flow, however, dipped by 21% to \$38,570,705 from 1993's \$48,871,488.

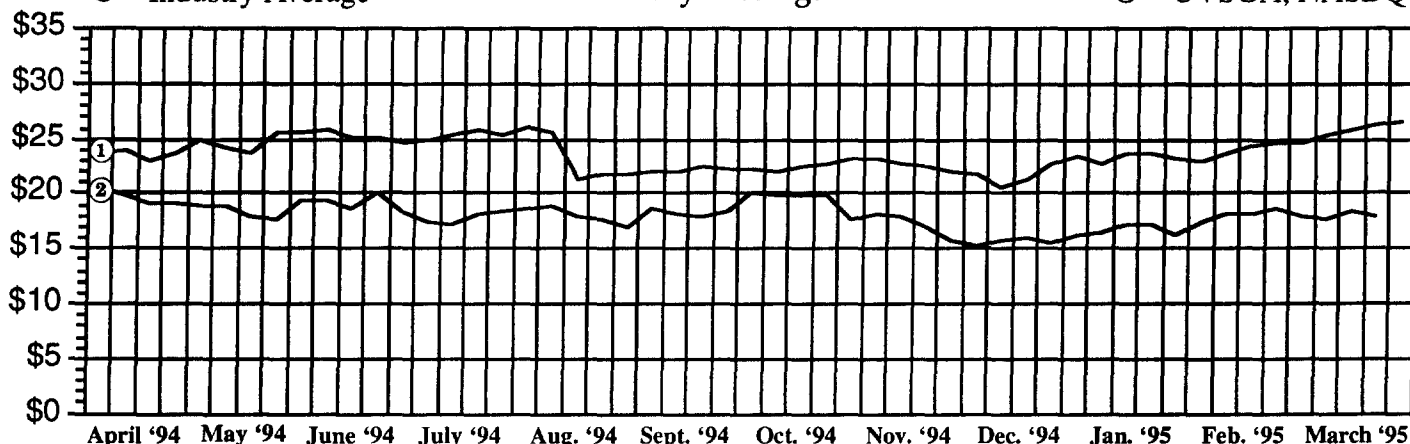
In recent news, United Video acquired 70% of **SSDS**, a privately-held systems integration company

which provides turn-key services on enterprise-wide information infrastructures on a nationwide basis. One example, is SSDS' deployment of Prevue's digital video file service network to some 3,000 cable headends both nationally and internationally. •

① - Industry Average

Weekly Closings

② - UVSGA, NASDAQ



Content, Not Conduit

Viacom International

Life is like a box of chocolates. You never know what's inside the cover ... or, win some, lose some. **Viacom** and its mercurial chairman **Sumner Redstone** have been on a roller coaster ride of wins and setbacks (Redstone doesn't recognize losses).

Forest Gump and the persistent good press notwithstanding, Viacom is in a bind ... its acquisition of **Blockbuster** mandates a significant financial penalty if Viacom's stock doesn't hit prescribed levels this fall. A number of deals to sell off assets have fallen apart lately including the sale of its television stations and its cable operating systems.

Quite unfortunately, liberal Democrat Redstone found himself the target of posturing Republican congressmen incensed with the tax deferment aspect of Viacom's planned sale of its cable systems to minority businessman **Frank Washington** and his partners, **Intermedia** and **TCI**. The all-but-dead deal became the victim of politics and, as Redstone has said, it is unfortunate that American businesses cannot count on the law when negotiating transactions. Nevertheless, Redstone and CEO

Frank Biondi have clearly bet on the future as content. Viacom's networks and its studio provide the foundation of the business as the company clearly wants to get out of the capital intensive cable business (where a buyer, probably still TCI, will be faced with significant upgrade costs) and the ups and downs of the station business. At the same time, the Blockbuster brand name will likely be exploited as Viacom uses the unit's massive cash flow to fund more programming activities.

The company's networks — with major brands like **Nickelodeon**, **MTV**, **VH-1**, **Showtime** and **The Movie Channel** — are carried via only **USSB** and the traditional C-band now. But hope springs eternal for other satellite program distributors and, perhaps, some deals could be made since there have been changes in Viacom's Showtime unit's management. The company is also launching a broadcast network in association with **United Broadcasting**. **UPN**, with its flagship *Star Trek: Voyager* series, shapes up as another network winner. And, analysts remain mostly bullish on the company. •

SkyWatch

President & CEO: Frank Biondi, Jr.

PER SHARE

52-Week High	\$48.25
52-Week Low	\$24.50

Last Quarter

Revenue	\$9.64
Earnings	\$1.45

Last Four Quarters

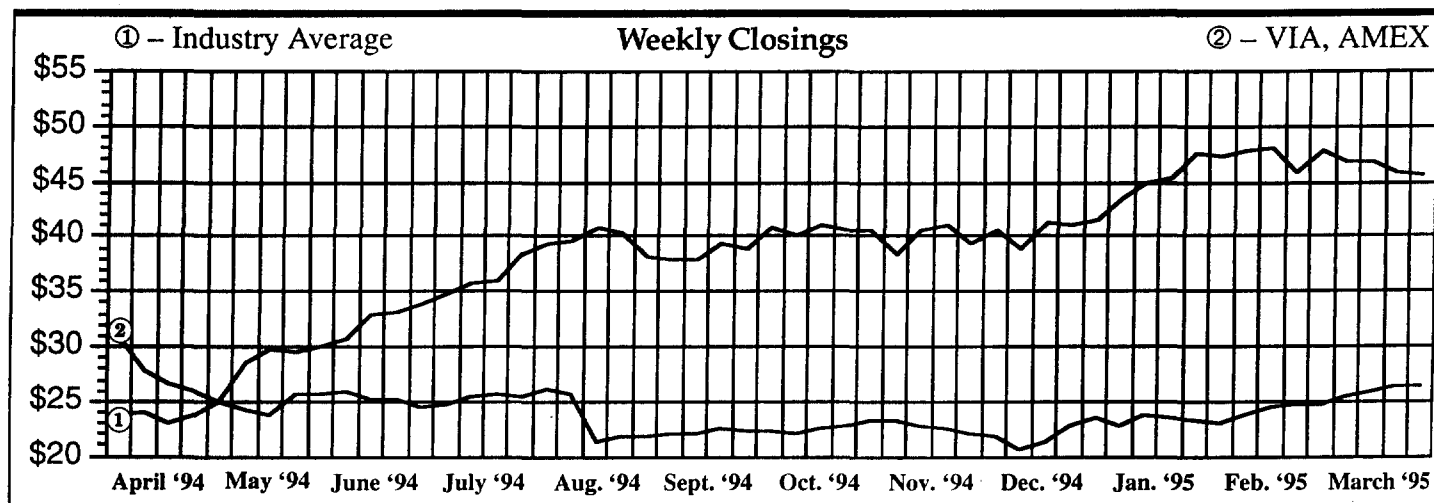
Revenue	\$33.45
Earnings	\$-0.37

GROWTH RATES

	1-Year	3-Year
Revenue	7.5%	7.8%
Earnings	136.4%	136.4%
Dividend	NM	NM

TOTAL REVENUES

1994	\$7,400,000,000
1993	\$2,004,949,000
1992	\$1,864,683,000



Money Breeds Money & Other Adages

Sony, BSkyB, Nokia

Needless to say, the direct-to-home business is growing – and increasingly that growth has lured the interest of others seeking to cash in on success.

Among the first here – to absolutely no one's great surprise – is Australian, English and U.S. media mogul Mr. *Rupert Murdoch*. Among the first to corner DBS markets overseas, Murdoch stuck his oars even deeper into business by taking his **British Sky Broadcasting** public and trading it not only in the U.K. but also on the New York Stock Exchange.

The ADR (BSY) appeared in early December trading at \$24 – \$28/ADR. By the end of March it was doing little better. However, several savvy media analysts, including *Jessica Reif* at **Merrill Lynch**, continue to award it double thumbs up due to its dominate position in the U.K., continued brisk dish sales in that country, a declining churn level and the **Disney Channels'** upcoming launch in October. In all, Reif has set a 12-month price objective at \$31- \$33 and she anticipates third quarter cash flow to grow at 35% - 40%.

A second, long-anticipated newcomer to the consumer side of DBS is **Sony Corp. (SNE, NYSE)** which has actually had one limb in the back room side of DSS since the beginning via its various products used in **DIRECTV's** Castle Rock Broadcast Center.

On the consumer side, Sony will put its own DSS equipment (with technologies licensed from

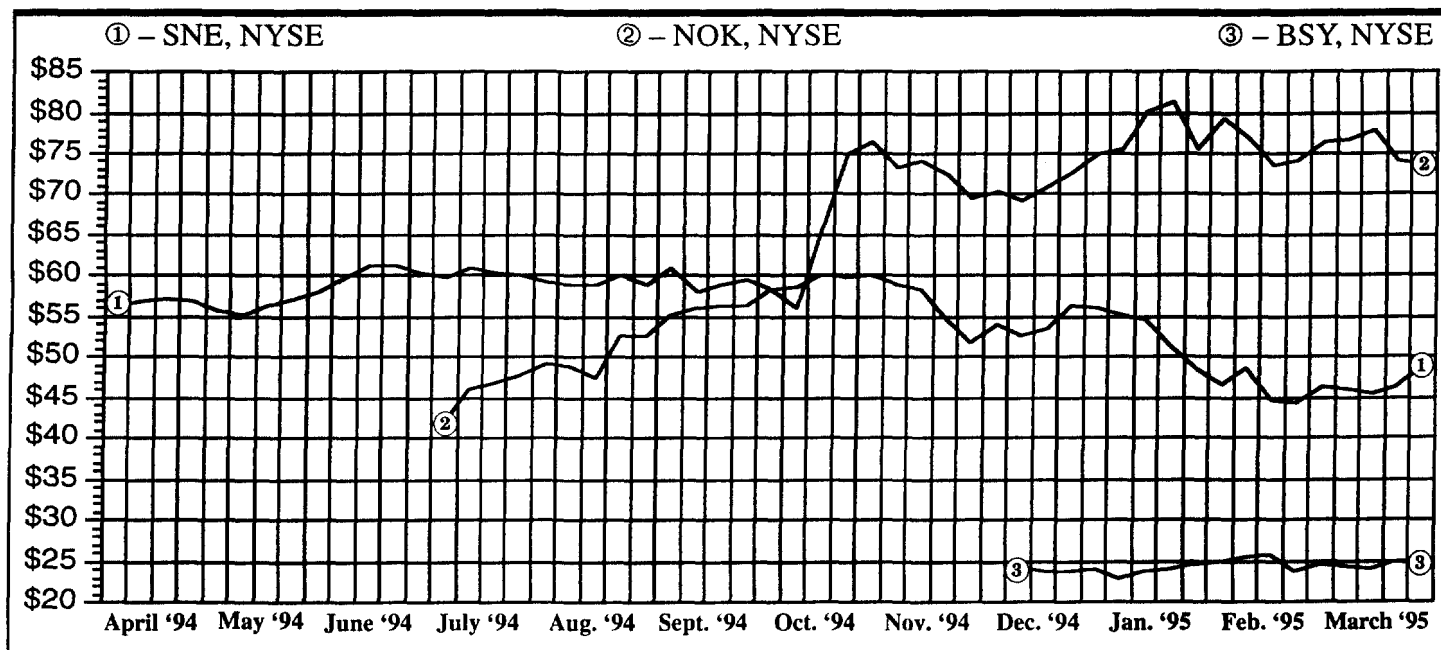
DIRECTV and **Thomson/RCA**) on the market this spring. Although Sony can't officially talk about its product at this time, the equipment was out for all to see at the **SBCA's** Winter show and a quick peek revealed sleek styling, a masterful navigator and smooth trackball technology.

After Sony's debut, **Hughes Electronics (GMH, NYSE)** will up its DSS stake by becoming the third designated equipment manufacturer via its **Hughes Network Systems**. The new Hughes equipment will be followed by **Uniden** and **Toshiba**, plus other, as yet unnamed, manufacturers.

A third public company to up its stake in U.S. DBS is the Finish telecommunication giant **Nokia Oy (NOK+, NYSE)**.

For some time, Nokia has nurtured a strategic alliance with **TV/COM**, a U.S. supplier of delivery solutions, including secure access control systems, for cable, satellite and terrestrial television networks. Due to the financial problems of TV/COM's private owner, Nokia and another European company **Irdeto** are expected to become TV/COM's new owners.

TV/COM is a critical player in Canadian **Al Bahnman's** plans to secure a key place in both U.S. and Canadian DBS services via **Tee-Comm's** partnership in Canada's **Expressvu** service, due to launch next year, and in its ownership of **AlphaStar**, a U.S.-aimed service planned to start at the end of this year. •



p r i v a t e

EQUIPMENT BEHEMOTHS, DBS



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PO BOX 6552
Englewood, CO 80155

303/799 8222
Fax: 303/799 6222

President
Charlie Ergen

Executive VP and COO
Carl Vogel

VP of Marketing and Sales
Dave Carlson

EchoStar manufactures and distributes direct-to-home satellite television products, including satellite televisions dishes, receivers, and programming and arranges third party consumer financing for such products and services sold worldwide.

Thompson Consumer Electronics

10330 North Meridian Street
Indianapolis, IN 46290-1024
317/587 4450
Fax: 317/587 6708

Executive Vice President of
Marketing and Sales
Joseph P. Clayton

Senior Vice President of
Production Management
James E. Meyer

TCE manufactures and markets RCA, GE, and ProScan consumer electronic products including color TV's, VCR's, camcorders, audio communication and satellite products, plus a full line of accessories.

On the equipment side of the direct-to-home business, private companies have a major piece of the pie. Names such as **Thomson Consumer Electronics (RCA)**, **Unimesh**, **Chaparral** and **Uniden** are responsible for a great bulk of receivers, feedhorns, LNBs and antenna manufactured for backyard dishes of all types and sizes.

Today, of course, private companies also play key roles in the DBS arena. **USSB** and **Thomson Consumer Electronics** are integral parts of DSS activities (along with publically-owned **Hughes Electronics**, the fathership for **DIRECTV**). And in new DBS activities, the two names to watch today are privately-owned **EchoStar Communications Corporation** and **TV/COM International**.

To take these is alphabetical order: **EchoStar Communications Corporation** is the holding company for the Echosphere Group of businesses which deliver DTH products and services to customers worldwide. The company's interests include everything from the design and manufacturing of satellite TV equipment (through wholly-owned **Houston Tracker Systems, Inc.**) to a consumer financing company to satellite business networks.

EchoStar President *Charlie Ergen* has long expressed his interest in launching a DBS service. Through a junk bond sale in mid-1994, Ergen netted some \$335 million for EchoStar DBS, and the company began work on a satellite uplink facility in Cheyenne, Wyoming.

In early 1995, however, Ergen received several set backs. First a Chinese-launched Long March rocket carrying a **Hughes** satellite exploded – seriously eroding Ergen chances for a planned fall of 1995 launch. On top of this, Ergen's failure to announce an EchoStar equipment vendor – whose investment is considered critical to DBS start-ups – has left indus-

try observers to doubt when – and in some cases, whether – EchoStar DBS will be a reality.

Ergen, however, has an excellent reputation for getting out of tight places. Speaking to a group at the SBCA Winter Show in Las Vegas, he made several announcements which move his service further forward. Namely: He has signed several key programmers – including **The Disney Channel**, **ESPN**, **USA**, **Turner Home Satellite**, **The Discovery Channel** and **The Learning Channel** – for his EchoStar service; he announced **Nagra-Kudelski's** INTERLOCK as his conditional access system; and he made clear that he intends to start offering EchoStar service by late 1995.

Because of its public debt, EchoStar recently filed financial results with the SEC. According to the company, t last fall's module shortage cost it roughly \$18.2 million in lost sales. 1994 revenue was \$191 million, down 14% from 1993's \$221 million.

Hubbard Broadcasting Inc., long a well-respected name in broadcasting and radio, threw its hat into the DBS ring over a decade ago when it obtained the license for what would become the **United States Satellite Broadcasting (USSB)** DBS service.

The company spent approximately \$100 million to join the **DIRECTV** and **Thomson Consumer Electronics (RCA)** DSS consortium and significant monies were raised from private investors such as *Paul Allen*, *Burt Harris*, a *George Soros* investment group, **Dow Jones**, **Nationwide Broadcasting** and **Nationwide Mutual Insurance**, and **Pitway Corp.**

At the same time, USSB moved to avoid being overshadowed by its transponder (and thus channel) rich partner, **DIRECTV**. In an unexpected, and critical, coup, the Hubbard company captured exclusive rights to both **Time Warner's** and **Viacom's**

c o m p a n i e s :

VENDORS & INDUSTRY WANNABES

premium service in the DSS arena.

With this, a strong marketing campaign and excellent consumer acceptance, USSB had some half-million customers by March 1995; over half (55%) of these customers subscribe to USSB's most expensive (\$34.95) programming package; and a recent company survey has revealed that 80% of USSB viewers are "extremely or very satisfied" with their purchase.

Although the company has no current plans to seek more investors, USSB sources don't rule out the possibility.

Having worked with Hughes to develop its system, **Thomson Consumer Electronics (RCA)** is the DSS major domo and the first profit-making beneficiary of the U.S. DBS craze. The French-owned company expects to sell its one millionth system sometime in May - at which point it will have recovered its entire investment (said to be \$100 million) in digital technology plus profit.

As other DSS equipment suppliers come on line (which include **Sony** to be followed by Hughes Networks, **Toshiba** and **Uniden** under separate licensing agreement), TCE naturally hopes to keep a dominant market share. To this end, the company has committed \$40 million to expanding its Juarez manufacturing facility. With the additional assembly lines expected to be rolling by mid-year, TCE will up its monthly output from approximately 100,000 units to 150,000.

To date, the company has shipped some 800,000 DSS systems which are available in consumer electronic retail stores and satellite television dealerships throughout the continental U.S. At about \$700 without installation, the low-end RCA DSS is approximately one-third the cost of C-band systems. With installation plus various bells and whistles, the DSS systems retails for around \$1000 - a price which is widely

expected to shrink as new players enter the field of DSS production.

TV/COM International supplies delivery solutions for cable, satellite and terrestrial television networks including secure access control systems. The company holds several key patents in the areas of signal format, scrambling/encryption and authorization/key distribution.

In recent months, the company has been rocked by financial problems - mainly, the bankruptcy of Denver uranium magnate **Oren Benton**, who owned TV/COM through his **Concord Group** of companies. Beset by a Commerce Dept. ruling that Russia was dumping its uranium in the U.S. (Benton was selling short at the time), Benton declared personal and business bankruptcy in February, leaving TV/COM generally in the lurch.

In response, the company strengthened its strategic alliances with European giants **Irdeto** of The Netherlands and **Nokia Consumer Electronics S.A. (NOK+, NYSE)** of Finland. With this semi-security in place, TV/COM then roiled DBS waters with two key announcements: First, it will provide technology for **Tee-Comm's (TENXF, NASDAQ)** equipment which will be used by **Expressvu**, the Canadian DBS service set for launch this September. TV/COM next revealed that it will also supply technology for Tee-Comm's **AlphaStar** DBS service which is aimed at U.S. citizens via an **AT&T** satellite and which plans to go live in December.

In addition, TV/COM has announced its selection to provide hardware to Saskatchewan Communications Network (SCN) of Canada for a digital Canadian satellite-based learning service - possibly putting the company in prime position as a DBS technology king-pin in the near future.

Most recently, South Korean car manufacturer **Hyundai** has begun to court TV/COM.

TV/COM International

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Executive Vice President
Anthony Wechselberger

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James Shelton

TC/COM International supplies delivery solutions, including security access control systems, for cable, satellite and terrestrial television networks.



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Stanley E. Hubbard

Executive Vice President
Robert W. Hubbard

Senior Vice President,
Marketing
Mary Pat Ryan

The Hubbard Broadcasting owned service offers multi-channel HBO, SHOWTIME, FLIX, and Cinemax, multi-channel The Movie Channel, as well as Lifetime, Comedy Central, Nickelodeon, Nick at Nite, MTV, VH1 and All News Channel.

Target: Mid-America

Seeking the Same Subs...

Or When 51,797,000 Million Households May Not Be Enough*

While the subscriber data currently available comes in a bit of an apples/oranges muddle, it makes one point quite clear:

At least one of the two DSS programming distributors, C-band and cable all share a common subscriber group. That's the 55% of the U.S. population which falls firmly in this country's vast mid socio-economic status (SES) class.

Beloved by advertisers and politicians alike, these are the folks with income levels between \$20,000 and \$50,000; high school or some college educations; and employment in skilled, administrative or sales jobs.

That, in a nutshell, is description that **Hubbard Broadcasting Inc.'s USSB** came up with when it conducted a recent survey of its subscriber pool. With 51% between the ages of 35 to 49, 60% with incomes between \$20,000 and \$50,000, plus 60% with high school or some college education, the USSB audience stacks up as a national political candidate's dream. (Add in the fact that 61% of the USSB audience is male and you have a right-wing national political candidate's dream.)

From the data available, this skew toward men appears to be a major point of separation between USSB, C-band and cable subscribers – which may explain why USSB's first pay-per-view trial will be a full day of drag racing in May.

In a 'bad-news-for-cable' category, USSB also revealed that 76% of its customers use antenna to pick up local stations. Thus, obviously, the customers must live in fairly well populated areas where local broadcast reception is available. (So much for the "DBS will only serve the non-cabled boonies" theory.) Second, the high incidence of antenna use, which is reflected in recent antenna sales figures, indicate that most cabled USSB customers do not keep their cable service.

Next in the DTH/cable subscriber pie comes C-band services which over the past decade (ever since programming was scrambled) has acquired close to 2.3 million subs. These are the "older, richer, better educated than cable" folks who were traditionally believed to lay out \$1900 to \$2300 to purchase a full-view dish system mainly because they lived in areas not served by cable.

That's not really true, of course, as a recent **Brus-**

kin/Goldring survey found that nearly 36% of C-band viewers currently subscribe to cable while another 33% have subscribed to cable in the past.

Some key attributes of this traditional dish audience are average incomes of \$44,200/year; a median age of 50.7 and a nearly even male/female split.

The behemoth of subscriber groups, of course, is the cable industry which, since a rather slow start through the 1950s and 1960s, grew through the '70s and '80s into the video monster that took over American televisions. Thanks to a monopoly-granted business – and some of the smartest entrepreneurs in the U.S. – today's giant cable companies reach an audience of 59.7 million, or about 63% of U.S. television households.

With about half (58%) married, the typical cable customer is lower middle aged (43.9 is the mean) and solidly mid-SES with a mean annual income of \$39,400.

Today's cable industry over shadows the entire DTH business by about 18,907%. If might makes right, as they say, then there's no question that cable will soon succeed in flattening DTH.

However, the cable guys have a few problems.

During their go-go years of growth, when cable was the only game in town, the wired video service did not pay a lot of attention to customer service or, for that matter, system quality. This hubris has now returned to haunt cable operators as several recent surveys have found many cable customers only too happy to try an alternative.

(Before that statement is misconstrued, however, we must repeat that the *entire DTH industry*, including C-band, DSS, plus cable-company owned **PRIMESTAR** is just under .05 the size of the cable universe – or, as said above, cable is 19,000 times DTH's size. What's more, even the most optimistic estimates don't expect home satellite subscriber lists to be even one-tenth the size of cable for several years.)

But back to cable's customer-bites-back problem: Recent evidence indicates that the bulk of new DTH subscribers come from the ranks of former (or mostly former) cable subscribers.

Not only that, they come from the ranks of some of cable's best subscribers. (See Early "Cable" Adopters opposite.)

**Represents 55% (the number of mid-SES households) of U.S. TV households.*

SUBSCRIBER PROFILES

C-BAND

SUBS
2.277 Million

AGE & SEX
Median Age – 50.7
50.4% – Male

INCOME
Mean Income –
\$44,200

EDUCATION
64.1% High School
or Some College

MARITAL STATUS
86.6% Married

USSB

SUBS
.5 Million

AGE & SEX
51% Between the
Ages of 35-49
61% - Male

INCOME
60% Between
\$20,000 - \$50,000

EDUCATION
60% High School or
Some College

CABLE

SUBS
59.7 Million

AGE & SEX
Mean Age – 43.9
48% - Male

INCOME
Mean Income –
\$39,400

EDUCATION
24% College Plus

MARITAL STATUS
58% Married

EARLY CABLE ADOPTERS

While specific statistics are available only to cable-company purchasers of the survey, the Horowitz/Liebmann study of early "cable" adopters indicates that these lost subs come from "very upscale" households. On average, they have some 3 televisions per HH, are high-tech buyers, were formerly pay subscribers at 175% pay/basic plus almost \$40/month revenue. And nine out of 10 are cable disconnects.

Data from A.C. Neilson, Horowitz & Liebmann, USSB research and SkyREPORT research.)

In fact, the DBS Early Adopter Survey conducted by **Horowitz Associates, Inc.** and **S. Liebmann Associates Inc.** at the end of last year, found that upscale, high-tech households were more likely to switch their primary video allegiance from cable to DBS and that nine out of 10 of the switchers disconnect their cable.

This contradicts some early "circumstantial" evidence which cable operators say points to new DBS subscribers downgrading rather than ditching their wired service. However of the data to date — soaring sales of off-air antenna plus the USSB survey results — point to an antenna rather than basic, or life-line, cable solution to the local channels problem.

According to a February'95 follow-up to the first Horowitz/Liebmann survey the key factors influencing a cable customers decision to try DBS are:

- Digital quality TV picture;
- CD-quality sound for TV;
- Not having to get cable; and
- Premium multi-plex.

The follow-up to the Early Adopter survey also looked at five point scale ratings to see how DBS customers felt about their service some 3 to 6 months since installation.

In some rather grim reading for cable executives, these revealed positive reactions to:

- DSS and service overall, 83%;
- TV reception and picture quality, 93%;
- Programs/channels get for money spend, 81%;
- Overall reliability of service in terms of interruptions and outages, 85%;
- Sound quality, 93%; and
- Local TV reception, 44%.•

C-Band Authorizations Continue To Rise

(Numbers through March 1995)

